



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/459,022 | 12/10/1999 | MING CHENG | 38-21(15084) | 9594 |

27161 7590 12/17/2003

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ATTENTION: G.P. WUELLNER, IP PARALEGAL, (E2NA)
ST. LOUIS, MO 63167

EXAMINER

HELMER, GEORGIA L

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1638

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/459,022 | Applicant(s) CHENG ET AL. | |
| | Examiner Georgia L. Helmer | Art Unit 1638 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7-9 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-9 and 18-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

REQUEST FOR CONTINUED EXAMINATION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 September 2003 has been entered.

Status of the Claims

2. Claims 1,2 and 7-9 remain pending and Applicant has added claims 18-23. Claims 1,2, 7-9 and 18-23 are examined in the instant action.
3. All rejections not addressed below have been withdrawn.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112-second paragraph

5. Claims 1,2, 7-9 and 18-23 are rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1,2, 7-9 and 18-23, and all claims dependent thereon,

Art Unit: 1638

In claim 1,

- In step 1(a) line 6, "gene" is unclear because a "gene" implies a DNA sequence that exists in nature and includes coding and noncoding regions, as well as all regulatory sequences associated with expression. Since this does not appear to be Applicant's intention, the language "a DNA of interest" is suggested. Or Applicant may recite the various components of the "gene" desired. All recitations of "gene" are also rejected.
- In step 1 (b), lines 9-10, "a vessel not containing media containing a gelling agent" is unclear. Does the vessel contain? Media? A gelling agent? Does the media contain a gelling agent?

Step (d) recites a "fertile" transgenic plant, but unless the starting material of step (a) is potentially a fertile plant, a fertile plant will not be produced in step (d). The suggestion is made to delete "fertile" from the claims.

In claim 22, there is an improper Markush group: tissue selected from "the group consisting of wheat immature embryos, maize immature embryos, wheat embryogenic callus, or maize embryogenic callus" is the (proper) Markush group, "from wheat or maize and soybean hypocotyl sections or soybean callus cell suspension cell

cultures from soybean" is improper. What is this? This language is unduly alternative, and has too many "or"s.

- line 6, what does "identification capable" mean?
- In line 7, what does "to be introduced " refer to?
- In line 10, "under limited or reduced" moisture conditions are indefinite because these are relative terms but lack a comparative basis.
- line 12, what does "withcomprising" mean?

Step (d) recites a "fertile" transgenic plant, but unless the starting material of step (a) is potentially a fertile plant, a fertile plant will not be produced in step (d). The suggestion is made to delete "fertile" from the claims.

All subsequent recitations of this language are also rejected.

Claim Rejections - 35 USC § 102

6. Claims 1,2,7-9, and 18- 23 remain rejected under 35 U.S.C. 102(b) as being anticipated by Chee, P, et al, in *Agrobacterium Protocols*, K. Gartland and M Davey, eds, (1995) Humana Press, Totowa, NJ, pages 101-119, for reasons of record. To the extent that this is a new rejection, it is necessitated by Applicant's amendment.

Applicant traverses, stating primarily (Response, p.9) that Chee does not anticipate the claimed invention because Chee does not describe the appropriate anatomical regions for Agrobacterium inoculation. Applicant further alleges that Chee does not describe any soybean explant other than specific regions of a soybean cotyledon whereas the claimed invention specifically claims soybean hypocotyls or soybean callus cell suspension cultures.

Applicant's traversal has been considered and is unpersuasive because Chee teaches inoculation of soybean cotyledons, and adjacent regions (p.107, Figure 2 and 3.1.4). Applicant's traversal that Chee inoculated Agrobacterium only at the specific sites indicated by the arrows of Figure 2 is unpersuasive because Chee did inoculations "into the plumule, cotyledonary node and adjacent regions".

Applicant traverses, stating primarily that Chee does not disclose any means for reducing the weight of the explant by limiting or reducing the moisture conditions to which the explant is exposed.

Applicant's traversal has been considered and is unpersuasive because Chee discloses placing Agrobacterium infected seeds on moist paper and incubating 4 days at 26 °C. Incubation of plant tissue for 4 days will result in water evaporation and therefore decrease in weight.

Note that the claim terminology "limited or reduced moisture conditions" is indefinite language, and therefore is given no patentable weight; see ¶ 112.2 above.

Art Unit: 1638

The language "whereby the weight of the Agrobacterium inoculated explant is reduced by up to 30%" encompasses a reduction of one molecule of water, or 1 microliter, which is negligible.

Accordingly, Chee anticipates the claimed invention.

7. Claims 1,2, 7-9, and 18- 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Somerville, et al, US 5,668,292, issued September 16, 1997, for reasons of record.

Applicant traverses, stating primarily that Sommerville teaches a method which utilizes media throughout and not a co-culture step without medium, citing Sommerville at col 25, 26, and 35, and Table 3. Applicant's traversal has been considered and is unpersuasive because Sommerville teaches a method comprising coculture without medium (col 26, lines 1-3).

Applicant traverses, stating primarily that there is no reference or disclosure that the explant was at any time removed from this media while being inoculated with the Agrobacterium, and that the only way the described steps make sense is if the tissue pieces were on media at all times.

Applicant's traversal has been considered and is unpersuasive Applicant is making a conclusionary statement but this statement offers no evidence.

Accordingly, Somerville anticipates the claimed invention.

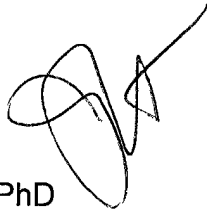
Remarks

8. No claim is allowed.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Georgia L. Helmer whose telephone number is 703-308-7023. The examiner can normally be reached on 8:30 - 5:00. *Note that Examiner's phone number will change to 571-272-0796 as of 6 January 2004.*

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.



Georgia L. Helmer PhD
Patent Examiner, Art Unit 1638
December 13, 2003



PHUONG T. BUI
PRIMARY EXAMINER 12/15/03